

# Teach Them to Tinker

How do we learn? What should we learn? Ahead of Teachers' Day, a search for some answers



EXPRESS ARCHIVE

Arvind Gupta

IN CHENNAI, where I live, one of the best schools admits predominantly upper-caste, upper-class children. This insulates them from the great diversity which is India. They will never sit next to a Muslim child or share their food with a Dalit. It is this narrow and skewed experiential base which makes people bigots when they grow up. We need to widen and enrich the experiences of our children. Under the Right to Education Act, a certain percentage of seats had to go to the poor. But the rich schools have thwarted this reservation.

In the landmark book *Totto Chan* (1981), a memoir by Japanese actor Tetsuko Kuroyanagi, the principal of the progressive school she attends deliberately admits children with special needs, for he is convinced that it would make the other children sensitive. Annie Koshi, the visionary principal of St Mary's School in Safdarjung Enclave, New Delhi, is another pioneer. Twenty per cent children in her school are "special" children — with hearing aids, crutches, or those who are visually impaired and mentally challenged. The other children help these children and learn their first lessons in compassion and empathy.

Dalit, Muslim and tribal children are constantly humiliated by upper-caste teachers in schools. The classic *Letter to a Teacher* (1967) was written by eight children of landless farmers and workers from the School of Barbiana, Italy. The book begins with this sentence, "School is a war against the poor."

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All surveys point to the failure of government schools. One out of every four Class VIII child in rural India is unable to read even a Class II text. And one out of two Class VIII students cannot solve a basic division problem.

Educational Initiatives, a group started by IIM-Ahmedabad graduates, conducted a

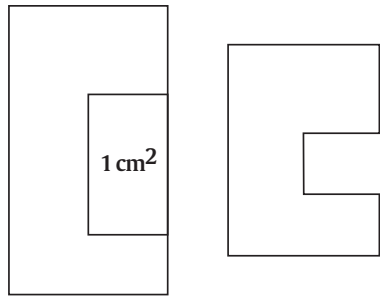
## CLASS STRUGGLE

What should schools learn: diversity, autonomy and scepticism

study in 2006 covering 30,000 students in India's leading schools in metros. The results showed that rote learning still dominated.

1. A 5-cm-long pencil was placed besides a ruler. Its ends rested on 1 cm and 6 cm of the scale. Only 11 per cent of Class IV children could read the length of the pencil correctly.

2. Cut off a square of side 1 cm from a rectangular sheet as shown. What will be the change in perimeter?



The perimeter will increase by 2 cm. Only 23 per cent students of Class VIII got the correct answer.

Since the start of liberalisation in 1990s, the Indian government has deliberately cut funds to government schools. After degrading and making them non-functional, the government is now all out to sell them to private players and religious trusts in the name of PPP (public-private partnership).

Why is the state of our government schools so bad? The upper and middle classes apparently have no stake left in them, as they have set up elite schools for their own children. The poorest classes have no choice but government schools. Four years ago, Justice Sudhir Agarwal of the Allahabad High Court recommended that all government servants must send their children to government schools. That would be a sure way to improve them!

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Children are born learners. John Holt's last

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Watch children in their free moments and they are always tinkering. This is what scientists do in their labs

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book, *Learning All the Time* (1968), has a subtitle: 'How children learn without being taught'. It is adult arrogance that we teach.

Watch children in their free moments and they are always tinkering, exploring. This is what scientists do in their labs. Children do this intuitively. But when they go to school, this natural curiosity dies out. Promptly, clever and smart children start learning by rote to please their teachers and parents, comprehending very little in the process.

Before children understand a thing, they need experience. Seeing, touching, hearing, arranging, taking things apart, putting things together. Experimenting with real things. In scores of science workshops, I have found that children who do not score well in exams are much better at making things with their hands.

In 1980, Finland decided to fix its messy education. It shut private schools and gave all its children — rich, poor or with different abilities — the same high-quality education. All children go to a neighbourhood school. The Finns believe that schools are places for children to have fun and discover what they like. So why burden them with silly tests? There are minimal or no exams until the age of 16; and there is full autonomy given to teachers and schools. (Our own school boards are obsessed with exams and controls). The Finns improved their teaching force, limited students testing to a minimum, and placed responsibility before accountability on teachers. The results: In the PISA Test, an international test for measuring scholastic

abilities, Finnish kids have been at the top for over a decade.

Finland also raised the social status of teachers. The top 10 per cent in secondary schools in Finland compete hard to become elementary school teachers. It is equivalent to cracking the IIT-JEE. The best in Finland want to become teachers.

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We live in challenging times. The democratic space for discussion has shrunk. Anyone who is even slightly critical of government policies is termed an anti-national, and trolled. Recently, a school in Haryana made its children and teachers write letters of praise to the PMO for scrapping Article 370 in Jammu and Kashmir. When schools succumb so low to political pressures, the future of our children seems grim. Will such schools ever promote critical or scientific thinking?

Our leaders make tall claims and glorify our past in science and technology. These claims are often cheap publicity, patently false, unverifiable and make us a laughing stock of the world. The wise Buddha said something very profound 2,500 years ago:

*Believe nothing just because you have been told  
Or because it comes from your teacher  
Or because it is written in your scriptures  
Test everything against reality  
And only if you find it to be true  
And conducive to the welfare of others  
Then embrace it.*

The biggest repository of books in the world ([archive.org](http://archive.org)) has 22 million books for free downloads. MIT, Stanford and others post high quality content online which can be freely downloaded. With uninspiring schools, children today have a choice. They can access resources on the internet and learn on their own, saving both time and money. Mark Twain said this over a century ago, "Don't let schools interfere with your education."

Arvind Gupta is a toymaker and educator

## Room For All

In a bridge school for migrant children, a Kannada teacher helps them join the conversation



AMRITA DUTTA

A IS FOR AFFECTION

Kannada teacher Pooja in a Samridhi Trust school

Amrita Dutta

WHY SHOULD we learn Kannada? We are going back home in a month."

In the eight years she has spent as a teacher for children of migrant labourers in Bengaluru, Pooja, 35, has heard many versions of this sullen question from children who have travelled with their parents to the metropolis from West Bengal or Odisha, Uttar Pradesh or Bihar. "So I tell them: 'Don't learn too much. Only a few words. Say you go to a shop and the shopkeeper abuses you. Say, you get into a fight. Will you even know what to say?'" she says.

But even the journey to that conversation is a long one. "The first two-three months are the most difficult. The students refuse to come. Their parents leave for work at the crack of dawn, hand them a Rs 10 note and leave them to do as they please. We spend a lot of time in the initial days looking for the children, herding them from their homes to school," says Pooja.

She is one of several teachers at the bridge schools run by Samridhi Trust, an NGO that works to coax migrant children into the school system. It does so through intensive one-year bridge programmes for children between six and 14 years, many of whom have never been to school. Founder Mom Banerjee recalls that the focus on inter-state and intra-state migrants grew out of her realisation a decade ago that they quickly dropped out of the Kannada-medium government schools. "A few of us had pooled our efforts into admitting children in our neighbourhood to a government school, and then felt good about it. But then it turned out they were not going there. They could not understand anything," she recalls. In some government schools in Bengaluru's migrant hubs like Marathahalli, "close to 40 per cent" children are inter-state and intra-state migrants, she says.

The bridge schools aim to teach children, according to age and ability, simple lessons in English, Hindi, basic concepts of numeracy and geography, and arm them with functional Kannada needed for the transition to government schools. It's here that teachers like Pooja come in. Her ally in teaching Kannada, ironically, is Hindi. "Most of the children do know Hindi, so I translate Kannada into Hindi. There are some who come straight from a remote village, and they know only Bangla. So, then I make them sit with the ones who know Hindi well, and ask them to explain things to their friends. It takes two-three months for them to understand," says Pooja.

The most important part of pedagogy in these schools is care and trust. "The important thing is to connect with the children. Learning can come later. I don't insist on talking in Kannada at all. We talk in any language in the class. I try to understand what their difficulties are. Some of them have to look after their siblings, especially the girls. Some earn precious extra money as ragpickers. Some want to study but their parents are not willing," she says.

Not all teachers are capable of this kind of empathy. Banerjee points out that several qualified teachers shrink from dealing with children of poor families. "They flag issues of hygiene, of behaviour. It is a class barrier," she says.

"I studied in a school just like this," says Pooja, who has studied till Class X. Her parents were quarry workers living in a village in the forests near Bannerghatta, south Bengaluru. "There was a government school but it was too far. So, most of the children were uneducated. Then the Ramakrishna Mission opened a school. They sent a person to fetch the children every day. They would provide a meal. That's how my brother and I got educated," she says.

Unlike in mainstream schools, a bridge school teacher has to compulsorily take every child along. By the end of six months, Pooja's students learn to speak small sentences in Kannada. A deal she struck with the kids has resulted in her picking up Bangla, too. "When I teach them how to say *kuthkoli* ('sit' in Kannada), they tell me *bosho*. And that's how it goes," she says.

## The School for Everyone

What can government schools do?  
Make democracy work

Anand Swaminathan

IF YOU are reading this piece, it is likely your child goes to an English-medium private school. Did the possibility of a government school occur to you? Did you consider it before deciding on the private school?

When I pose this question to my friends, this is the usual refrain: "But they are of such poor quality, insufficient classrooms, inadequate teachers. The school teaches in the local language, not English. Why would anybody in their right mind send their child to such a school? Government schools are not for people like us; *wahan gareeb ke bachche jaate hain* (Poor people's children study there)."

This narrative, fuelled by mainstream media and a large number of neo-liberal voices in civil society, has become so dominant that any experience or evidence to the contrary has little chance of a hearing.

At Azim Premji Foundation, every day, our teams go to government schools that are off

the radar, in the deserts of Rajasthan, the mountains of Uttarakhand, the tribal belt of central India, and in many other parts of the country. This continuous on-the-ground engagement with thousands of teachers and others, year after year, has given us a deep insight into the methods and motivations of the government school system. These experiences are often at variance with the popular pejorative narrative and need telling.

Over the past three decades, India has pushed hard to have a school in every village. Walk into any community, no matter how remote, and it's likely you will see a government school. With close to 11 lakh elementary schools, we have one of the largest government school systems in the world. School enrolment is close to universal, irrespective of gender, caste, or religion. If you consider that just 30 years ago, less than half of our girls were in school, this is nothing short of remarkable. In a country as vast as ours and with its complex geographies, this is an enormous achievement.

More often than not, teachers and stu-



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dents come to school, and there is a genuine effort at education. Schools typically have sufficient classrooms, potable water, toilets for boys and girls — though upkeep is a challenge given inadequate maintenance budgets. For many students, the school mid-day meal is the most important meal of the day. That the government manages to pull this off, day after day in 11 lakh distributed locations, is an administrative feat worthy of study.

However, despite genuine efforts at teaching, and years of schooling, students struggle to learn. This learning difficulty is primarily

down to ineffective methods of teaching.

Many new teachers begin in right earnest and often go out of their way to make things work. In the districts we work in, close to 25 per cent government teachers and head teachers voluntarily give their personal time — after school hours, over weekends and holidays — to engage in their development. How many of us would be willing to sacrifice our holidays, month after month, so we can do our jobs better? However, after a few months or years of trying, most teachers end up resorting to the least effective of pedagogic methods, which is built largely on lectures, rote, drills and the stick. This is not a comment on teachers themselves, but a reflection of the pathetic state of teacher education in India.

The big challenge to Indian education is the burgeoning of private schools. It is fuelled, among other things, by a false belief that these schools are better — study after study has conclusively shown that learning in private schools is not better than in government schools. Differences are primarily because private school students come from more privileged homes with significant beyond-school learning opportunities and resources.

These for-profit schools are at every fee level, from hundred rupees per month right up to a lakh of rupees per month. A direct import of this is that private schools tend to serve socially and economically homogenous groups, furthering social stratification. By do-

ing this, we are designing inequity right into the heart of our society. Taken as a whole, the private school system vitiates the purpose of education in a democracy.

From what we have seen, many of the private schools employ unqualified teachers on almost contract-labour wages, and operate out of tightly packed and unsafe premises. Fear is considered an acceptable pedagogic tool, and there is little attempt to customise school practices for the child.

Many believe this shift is part of a larger social shift from public to private provisioning of services, fuelled by a growing distrust of public institutions. But education is not a service that can be traded, but a social process in developing a certain kind of citizenship and nation.

Our country needs a school system that actively works for its ideals, one that exposes students to democratic values and rational ideas. And I cannot visualise any other construct, except a government school, playing this role in full measure and at the scale that our country demands. To truly understand the government school system, one has to take a decadal view. And that tells us that, rather than being a system in decline, it is a system that is slowly maturing. With the right support, it can improve.

Anand Swaminathan is CEO, Azim Premji Philanthropic Initiatives